



PATENT SPECIFICATION

609,133

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(Patent of Addition to No. 571,498 dated March 31, 1942.)

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Index at acceptance:—Class 140, E3(d: g2).

COMPLETE SPECIFICATION

Improved Dielectric Compositions

We, THE BRITISH THOMSON-HOUSTON COMPANY, LIMITED, a British Company having its registered office at Crown House, Aldwych, London, W.C.2, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

10 This invention relates to dielectric compositions and is an improvement in or modification of such compositions as described and claimed in the specification of our Patent No. 571,498.

15 Improved characteristics are obtained by the presence, in compositions of hydrogenated vegetable oil and aromatic sulphones as claimed in the parent specification, of additional ingredients which 20 according to the present invention consist of a chlorinated diphenyl and betachlor anthraquinone as components. For example, capacitors impregnated containing the following range of ingredients by 25 weight are characterized by a substantially stable capacity over a wide range of temperatures:—

Per Cent.

Hydrogenated castor oil	92 to 96
Chlorinated diphenyl	6 to 1.99
Dinaphthyl sulphone	1.94 to 1.99
Betachlor anthraquinone	.06 to .02
A capacitor dielectric composition consisting by weight of 92 per cent. hydrogenated castor oil, 6 per cent. pentachlor diphenyl, 1.94 per cent. of dinaphthyl sulphone and .06 per cent. of betachlor anthraquinone when employed as an impregnant for capacitors containing three sheets of .0004 kraft paper is characterized by substantially constant capacity of an ambient temperature range of 25 to 125° C.	
Substantially constant capacity over the	

same temperature range characterizes 45 similar capacitors impregnated with a composition consisting by weight of 85.9 per cent. of hydrogenated castor oil, 10.5 per cent. of pentachlor diphenyl, 3.5 per cent. dimethyl diphenyl sulphone and .1 50 per cent. of betachlor anthraquinone.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim 55 is:—

1. A dielectric composition suitable for impregnating capacitors, consisting mainly of hydrogenated vegetable oil and containing as minor ingredients 60 an aromatic sulphone, a chlorinated diphenyl, and betachlor anthraquinone.

2. A dielectric composition as claimed in claim 1, wherein the oil is castor oil.

3. A dielectric composition as claimed 65 in claim 1 or 2 wherein the diphenyl is pentachlor diphenyl.

4. A dielectric composition consisting by weight of hydrogenated castor oil 92 to 96 per cent., dinaphthyl sulphone 1.94 to 70 1.99 per cent., chlorinated diphenyl 6 to 1.99 per cent., betachlor anthraquinone .06 to .02 per cent.

5. A dielectric composition consisting by weight of hydrogenated castor oil 92 75 96 per cent., dinaphthyl sulphone 1.94 per cent., pentachlor diphenyl 6 per cent., betachlor anthraquinone .06 per cent.

6. A dielectric composition consisting by weight of 85.9 per cent. hydrogenated 80 castor oil, dimethyl diphenyl sulphone 3.5 per cent., pentachlor diphenyl 10.5 per cent., betachlor anthraquinone .1 per cent.

Dated this 28th day of February, 1946.

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